

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method of using a settable fluid in a subterranean formation comprising the step of placing a displacement fluid comprising vitrified shale and hydrated lime in a well bore in a subterranean formation so as to displace a second fluid therefrom.
2. (Original) The method of claim 1 wherein the second fluid is a drilling fluid.
3. (Original) The method of claim 1 further comprising the step of placing a casing string within the well bore, wherein the step of placing a casing string within the well bore is performed after the step of placing a displacement fluid comprising vitrified shale and hydrated lime in a well bore in a subterranean formation so as to displace a second fluid therefrom.
4. (Original) The method of claim 3 further comprising the step of placing a cement composition within the well bore so as to displace at least a portion of the displacement fluid therefrom, wherein the step of placing a cement composition within the well bore so as to displace at least a portion of the displacement fluid therefrom is performed after the step of placing a casing string within the well bore.
5. (Original) The method of claim 4 further comprising the step of permitting the cement composition to set in the well bore.
6. (Original) The method of claim 4 further comprising the step of permitting any remaining portion of the displacement fluid in the well bore to set therein.
7. (Original) The method of claim 1 wherein the displacement fluid further comprises water, and wherein the water is fresh water, salt water, brine, sea water, or a mixture thereof.
8. (Original) The method of claim 7 wherein the water is present in the displacement fluid in an amount sufficient to form a pumpable slurry.
9. (Original) The method of claim 8 wherein the water is present in the displacement fluid in an amount in the range of from about 35% to about 60% by weight of the displacement fluid.
10. (Original) The method of claim 1 wherein the vitrified shale is present in the displacement fluid in an amount sufficient to form calcium silicate hydrates.

11. (Original) The method of claim 10 wherein the vitrified shale is present in the displacement fluid in an amount in the range of from about 30% to about 60% by weight of the displacement fluid.

12. (Original) The method of claim 1 wherein the hydrated lime is present in the displacement fluid in an amount sufficient to form calcium silicate hydrates.

13. (Original) The method of claim 12 wherein the hydrated lime is present in the displacement fluid in an amount in the range of from about 2% to about 15% by weight of the displacement fluid.

14. (Original) The method of claim 1 wherein the displacement fluid further comprises a viscosifying agent.

15. (Original) The method of claim 14 wherein the viscosifying agent is present in the displacement fluid in an amount sufficient to provide a desired degree of solids suspension.

16. (Original) The method of claim 14 wherein the viscosifying agent comprises hydroxyethylcellulose.

17. (Original) The method of claim 1 wherein the displacement fluid further comprises a set retarder.

18. (Original) The method of claim 17 wherein the set retarder comprises a lignosulfonate or a nucleation poisoning agent.

19. (Original) The method of claim 18 wherein the nucleation poisoning agent is a phosphonic acid derivative.

20. (Original) The method of claim 17 wherein the set retarder is present in the displacement fluid in an amount in the range of from about 0.09% to about 0.9% by weight of the displacement fluid.

21. (Original) The method of claim 1 wherein the displacement fluid further comprises a set accelerator.

22. (Original) The method of claim 21 wherein the set accelerator is present in the displacement fluid in an amount in the range of from about 0.5% to about 2% by weight of the displacement fluid.

23. (Original) The method of claim 1 wherein the displacement fluid further comprises a weighting agent, a fluid loss control additive, a defoamer, a dispersing agent, a salt, a formation conditioning agent, or a mixture thereof.

24. (Original) The method of claim 1 wherein the displacement fluid further comprises water, and wherein the water is present in the displacement fluid in an amount in the range of from about 40% to about 50% by weight of the displacement fluid; wherein the vitrified shale is present in the displacement fluid in an amount in the range of from about 40% to about 50% by weight of the displacement fluid; and wherein the hydrated lime is present in the displacement fluid in an amount in the range of from about 3% to about 10% by weight of the displacement fluid.

25. (Original) A method of producing hydrocarbons in a subterranean formation comprising the step of drilling a well bore in a subterranean formation using a drilling fluid comprising vitrified shale and hydrated lime.

26. (Original) The method of claim 25 further comprising the step of placing a casing string within the well bore, wherein the step of placing a casing string within the well bore is performed after the step of drilling a well bore in a subterranean formation using a drilling fluid comprising vitrified shale and hydrated lime.

27. (Original) The method of claim 26 further comprising the step of permitting the drilling fluid to set behind the casing string, wherein the step of permitting the drilling fluid to set behind the casing string is performed after the step of placing a casing string within the well bore.

28. (Original) The method of claim 25 wherein the drilling fluid further comprises water, and wherein the water is fresh water, salt water, brine, sea water, or a mixture thereof.

29. The method of claim 28 wherein the water is present in the drilling fluid in an amount sufficient to form a pumpable slurry.

30. (Original) The method of claim 29 wherein the water is present in the drilling fluid in an amount in the range of from about 35% to about 60% by weight of the drilling fluid.

31. (Original) The method of claim 25 wherein the vitrified shale is present in the drilling fluid in an amount sufficient to form calcium silicate hydrates.

32. (Original) The method of claim 31 wherein the vitrified shale is present in the drilling fluid in an amount in the range of from about 30% to about 60% by weight of the drilling fluid.

33. (Original) The method of claim 25 wherein the hydrated lime is present in the drilling fluid in an amount sufficient to form calcium silicate hydrates.

34. (Original) The method of claim 33 wherein the hydrated lime is present in the drilling fluid in an amount in the range of from about 2% to about 15% by weight of the drilling fluid.

35. (Original) The method of claim 25 wherein the drilling fluid further comprises a set retarder.

36. (Original) The method of claim 35 wherein the set retarder comprises a lignosulfonate, or a nucleation poisoning agent.

37. (Original) The method of claim 36 wherein the nucleation poisoning agent is a phosphonic acid derivative.

38. (Original) The method of claim 35 wherein the set retarder is present in the drilling fluid in an amount in the range of from about 0.09% to about 0.9% by weight of the drilling fluid.

39. (Original) The method of claim 25 wherein the drilling fluid further comprises a viscosifying agent.

40. (Original) The method of claim 39 wherein the viscosifying agent is present in the drilling fluid in an amount sufficient to provide a desired degree of solids suspension.

41. (Original) The method of claim 39 wherein the viscosifying agent comprises hydroxyethylcellulose.

42. (Original) The method of claim 25 wherein the drilling fluid further comprises a set accelerator.

43. (Original) The method of claim 42 wherein the set accelerator is present in the drilling fluid in an amount in the range of from about 0.5% to about 2% by weight of the drilling fluid.

44. (Original) The method of claim 25 wherein the drilling fluid further comprises a weighting agent, a fluid loss control additive, a defoamer, a dispersing agent, a salt, a formation conditioning agent, or a mixture thereof.

45. (Original) The method of claim 25 wherein the drilling fluid further comprises water, and wherein the water is present in the drilling fluid in an amount in the range of from about 40% to about 50% by weight of the drilling fluid; wherein the vitrified shale is present in the drilling fluid in an amount in the range of from about 40% to about 50% by weight of the

drilling fluid; and wherein the hydrated lime is present in the drilling fluid in an amount in the range of from about 3% to about 10% by weight of the drilling fluid.

46. (Original) A settable fluid comprising vitrified shale and hydrated lime.

47. (Original) The settable fluid of claim 46 further comprising water, wherein the water is fresh water, salt water, brine, sea water, or a mixture thereof.

48. (Original) The settable fluid of claim 47 wherein the water is present in an amount sufficient to form a pumpable slurry.

49. (Original) The settable fluid of claim 48 wherein the water is present in an amount in the range of from about 35% to about 60% by weight of the settable fluid.

50. (Original) The settable fluid of claim 46 wherein the vitrified shale is present in an amount sufficient to form calcium silicate hydrates.

51. (Original) The settable fluid of claim 50 wherein the vitrified shale is present in an amount in the range of from about 30% to about 60% by weight of the settable fluid.

52. (Original) The settable fluid of claim 46 wherein the hydrated lime is present in an amount sufficient to form calcium silicate hydrates.

53. (Original) The settable fluid of claim 52 wherein the hydrated lime is present in an amount in the range of from about 2% to about 15% by weight of the settable fluid.

54. (Original) The settable fluid of claim 46 further comprising a viscosifying agent.

55. (Original) The settable fluid of claim 54 wherein the viscosifying agent is present in an amount sufficient to provide a desired degree of solids suspension.

56. (Original) The settable fluid of claim 54 wherein the viscosifying agent comprises hydroxyethylcellulose.

57. (Original) The settable fluid of claim 46 further comprising a set retarder.

58. (Original) The settable fluid of claim 57 wherein the set retarder comprises a lignosulfonate or a nucleation poisoning agent.

59. (Original) The settable fluid of claim 58 wherein the nucleation poisoning agent is a phosphonic acid derivative.

60. (Original) The settable fluid of claim 57 wherein the set retarder is present in an amount in the range of from about 0.09% to about 0.9% by weight of the settable fluid.

61. (Original) The settable fluid of claim 46 further comprising a set accelerator.

62. (Original) The settable fluid of claim 61 wherein the set accelerator is present in an amount in the range of from about 0.5% to about 2% by weight of the settable fluid.

63. (Original) The settable fluid of claim 46 further comprising a weighting agent, a fluid loss control additive, a defoamer, a dispersing agent, a salt, a formation conditioning agent, or a mixture thereof.

64. (Original) The settable fluid of claim 46 further comprising water, wherein the water is present in an amount in the range of from about 40% to about 50% by weight of the settable fluid; wherein the vitrified shale is present in an amount in the range of from about 40% to about 50% by weight of the settable fluid; and wherein the hydrated lime is present in an amount in the range of from about 3% to about 10% by weight of the settable fluid.